

Response filed April 5, 2011

Reply to OA dated January 10, 2011

REMARKS

Claims 1-8 and 10-16 are pending in this application. No amendment is made in this Response. Applicant submits that this Response is fully responsive to the Office action dated January 10, 2011.

Claims 1, 4-5, 7-8, 10-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over IDS reference to Hayashi (JP 2003321502 abstract and machine translation), in view of the combination of Musher and *Handbook of Hydrocolloids* (Pages 155-168). (Office action item (A))

Claims 2-3, 6 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hayashi, Musher and *Handbook of Hydrocolloids* as applied to claim 1, further in view of IDS reference to Lee et al (EP 0108594). (Office action item (B))

The rejections are respectfully traversed and reconsideration of the rejections is requested in view of the following remarks and the attached Declaration under 37 CFR 1.132, signed by Tsuyoshi KATAOKA, presenting experimental data relevant to the rejections.

In traversing the rejection, Applicant respectfully disagrees with the Examiner regarding the teachings of the Hayashi JP '502A reference. The Examiner states that Hayashi (JP2003321502A) discloses a process "comprising a step of making unheated gum arabic into an aqueous solution, and a step of maintaining the thus-obtained aqueous solution to 30 °C or higher," as recited in claim 1.

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However, Hayashi JP '502A does **not** disclose making an aqueous solution of gum arabic. Rather, Hayashi JP '502A discloses "carrying out a step of adjusting to 3 to 30% the water content of ground gum arabic" followed by a warming step (see Abstract and [0006]), resulting in a "paste liquid."

In fact, the maximum solubility of gum arabic to water is 50 wt%; it is impossible to prepare an aqueous solution containing gum arabic at a concentration of as high as 70-93 wt% (corresponding to the 3 to 30% water in Hayashi). Accordingly, the gum arabic of Hayashi containing 3 - 30 wt% of moisture is **not** an aqueous solution, but rather a wet solid.

To further support this argument, Applicants here submit experimental data in the attached Declaration under 37 C.F.R. §1.132. The experimental data show the observed results of an experiment where water is added to gum arabic with variable water contents (Loss on drying: reduction in moisture content when dried by heating at 105°C for 6 hours (please refer to the specification on page 5, lines 11-12)). The data show the state of the gum arabic where the water content was 3 wt%, 30 wt%, 50 wt%, 70 wt% and 90 wt%.

As shown by the data, gum arabic finally begins to become a solution at a moisture content of 50 wt%. That is, gum arabic at a lower moisture content, such as the 3-30 wt% in Hayashi et al., is in a wet solid state.

Hayashi therefore does not disclose or suggest the process of claim 1. Moreover, in claim 4, the process for improving the emulsification power of the gum arabic of the present invention is characterized by comprising at least a step of making unheated gum arabic into an aqueous solution, and maintaining the thus-obtained aqueous solution at 5 to 40° C for at least 6 hours. In contrast, it is clear that Hayashi discloses neither the step of processing gum arabic

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into an aqueous solution, nor the step of maintaining the thus-obtained aqueous solution at 5 to 40°C for at least 6 hours.

The Musher, *Handbook of Hydrocolloids* and Lee et al. references merely disclose general information concerning gum arabic. There is no suggestion in these references for modifying the method of Hayashi in any manner that would yield the present invention. Moreover, the process of Hayashi cannot result in the product-by-process of claim 10, which is made by the method of claim 1.

Accordingly, claims 1-8 and 10-16 are not obvious over Hayashi, Musher, *Handbook of Hydrocolloids* and Lee et al (EP 0108594), taken separately or in combination.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the Applicants' undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, the Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosure: Declaration under 37 C.F.R. §1.132